2 Product Specifications

2-1 Specifications

Item	Description	
	NB17A*	NB19A*
LCD Panel	TFT-LCD panel, RGB vertical stripe, normally black transmissive, 17-Inch viewable, 0.264 (H) x 0.264 (V) mm pixel pitch	TFT-LCD panel, RGB vertical stripe, normally black transmissive, 19-Inch viewable, 0.298 (H) x 0.298(V) mm pixel pitch
Scanning Frequency	Horizontal : 31 kHz ~ 81 kHz (Automatic) Vertical : 56 Hz ~ 75 Hz	Horizontal : 31 kHz ~ 81 kHz (Automatic) Vertical : 56 Hz ~ 85 Hz
Display Colors	16.2 Million colors	16.7 Million colors
Maximum Resolution	Horizontal : 1280 Pixels Vertical : 1024 Pixels	
Input Video Signal	Analog, 0.714 Vp-p ± 5% positive at 75 Ω, internally terminated	
Input Sync Signal	Type : Separate H/V sync, Composite H/V Level : TTL level (V high ≥ 2.0 V, V low ≤ 0.8 V), Sync-on-Green (≤ –0.25 V)	
Maximum Pixel Clock rate	135 MHz	
Active Display Horizontal/Vertical	338 ± 3 mm / 270 ± 3 mm	376.32 ± 3 mm / 301.056 ± 3 mm
AC power voltage & Frequency	AC 90 ~ 264 Volts, 60/50 Hz ± 3 Hz	
Power Consumption	42 W (max), 40W (normal)	42 W (max), 40W (normal)
Dimensions Set (W x D x H) Package	14.5 x 15.5 x 7.0 Inches (368.2 x 394.3 x 177.0mm) With stand 14.5 x 12.2 x 2.3 Inches (368.2x 310.1x 58.8 mm) Without stand 17.9 x 7.7 x 19.1 Inches (454x 195 x 483 mm)	16.4 x 16.2 x 8.1 Inches (416.3 x 411.7 x 207.0 mm) With stand 16.4 x 13.5 x 2.3 Inches (416.3 x 342.0 x 57.9 mm) Without stand 20.1 x 7.7 x 20.0 Inches (510x 195 x 507 mm)
Weight (Set/Package)	4.7 kg (10.4 lbs) / 6.0 kg (13.2 lbs)	5.95 kg (13.1 lbs) / 7.8 kg (17.2 lbs)
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -13°F ~ 113°F (-25°C ~ 45°C) Storage Humidity : 5 % ~ 95 %	

- NB17A*/NB19A* complies with SWEDAC (TCO 99) recommendations for reduced electromagnetic fields.
- Designs and specifications are subject to change without prior notice.

2-2 Pin Assignments

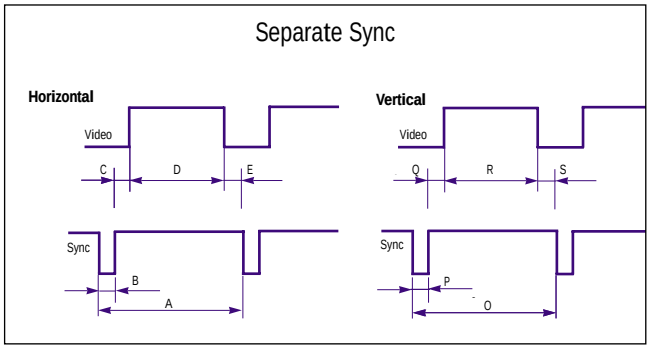
Sync Type / Pin No.	15-Pin D-Sub Signal Cable Connector		
	Separate	**Composite**	**Sync-on-green**
1	Red	Red	Red
2	Green	Green	Green + H/V Sync.
3	Blue	Blue	Blue
4	GND	GND	GND
5	DDC Return (GND)	DDC Return (GND)	DDC Return (GND)
6	GND-R	GND-R	GND-R
7	GND-G	GND-G	GND-G
8	GND-B	GND-B	GND-B
9	DDC Power Input (+5V)	DDC Power Input (+5V)	DDC Power Input (+5V)
10	Self Raster	Self Raster	Self Raster
11	GND	GND	GND
12	Bi-Dr Data (SDA)	Bi-Dr Data (SDA)	Bi-Dr Data (SDA)
13	H-Sync.	H/V-Sync.	Not Used
14	V-Sync.	Not Used	Not Used
15	DDC Clock (SCL)	DDC Clock (SCL)	DDC Clock (SCL)

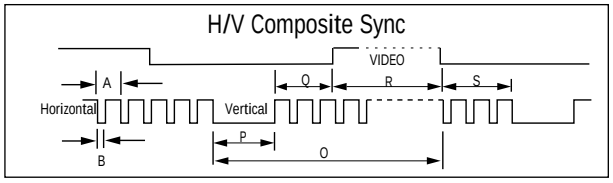
2-3 Timing Chart

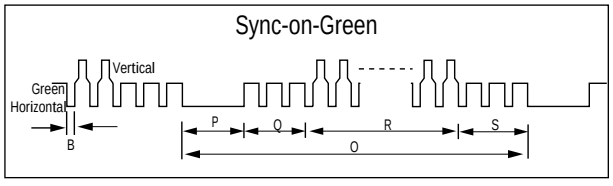
This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 2-1 Timing Chart

Mode / Timing	IBM		VESA						
	VGA2/ 70 Hz 720 x 400	VGA3/ 60 Hz 640 x 480	640/75 Hz 640 x 480	800/60 Hz 800 x 600	800/75 Hz 800 x 600	1024/60 Hz 1024 x 768	1024/75 Hz 1024 x 768	1280/60 Hz 1280 x 1024 (Analog)	1280/75 Hz 1280 x 1024 (Analog)
fH (kHz)	31.469	31.469	37.500	37.879	46.875	48.363	60.023	63.981	79.975
A µsec	31.777	31.778	26.667	26.400	21.333	20.677	16.660	11.852	12.504
B µsec	3.813	3.813	2.032	3.200	1.616	2.092	1.219	1.037	1.067
C µsec	1.589	1.589	3.810	2.200	3.232	2.462	2.235	2.296	1.837
D µsec	26.058	26.058	20.317	20.000	16.162	15.754	13.003	9.259	9.481
E µsec	0.318	0.318	0.508	0.000	0.323	0.369	0.203	0.000	0.119
fV (Hz)	70.087	59.940	75.000	60.317	75.000	60.004	75.029	60.020	75.025
O msec	14.268	16.683	13.333	16.579	13.333	16.666	13.328	16.005	13.329
P msec	0.064	0.064	0.080	0.106	0.064	0.124	0.050	0.047	0.038
Q msec	0.858	0.794	0.427	0.607	0.448	0.600	0.466	0.594	0.475
R msec	13.155	15.761	12.800	15.840	12.800	15.880	12.795	15.630	12.804
S msec	0.191	0.064	0.027	0.0261	0.021	0.062	0.017	0.016	0.013
Clock Freq. (MHz)	28.322	26.175	31.500	40.000	49.500	75.000	78.750	108.000	135.000
Polarity H.Sync	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive
V.Sync	Positive	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive
Remark	Separate	Separate	Separate	Separate	Separate	Separate	Separate	Separate	Separate







A : Line time total	B : Horizontal sync width	O : Frame time total	P : Vertical sync width
C : Back porch	D : Active time	Q : Back porch	R : Active time
E : Front porch		S : Front porch	

Memo